



April 6, 2021

The Honorable Chair and Members of the
Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, Room 103
Honolulu, HI 96813

Re: Docket No. 2007-0008 – In the Matter of Public Utilities
Commission Instituting a Proceeding to Examine Hawaii's
Renewable Portfolio Standards Law, Hawaii Revised Statutes
("HRS") §§ 269-91 – 269-95, as Amended by Act 162, Session
Laws of Hawaii 2006: Kauai Island Utility Cooperative's ("KIUC's")
2020 Annual Renewable Portfolio Standards ("RPS") Status Report

Dear Commissioners and Commission Staff:

As you know, KIUC normally submits an original and 8 copies of KIUC's Annual RPS Status Report for the year ending December 31, 2020 ("2020 RPS Report"). However, in light of the COVID-19 situation, we will be submitting a PDF file instead.

As shown in the attached 2020 RPS Report, renewable energy resources and energy savings supplied 67.1% of KIUC's net electricity sales during the 2020 calendar year. This exceeds the year 2020 RPS goal of 30.0% to be achieved by each electric utility as established by HRS § 269-92(a)(1), as amended.

The attached 2020 RPS Report also includes a breakdown of the renewable energy resources on Kauai comprising the 67.1% RPS for 2020 and the RPS reached in 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018 and 2019. Also included in said report is a discussion of KIUC's commitment to continue to increase the growth of renewable energy and energy savings on Kauai.

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The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
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We thank you for your consideration of this matter. If you should have any questions concerning this report, please call me at (808) 246-8289.

Very truly yours,

A handwritten signature in blue ink that reads "Brad W. Rockwell". The signature is written in a cursive, slightly slanted style.

Brad W. Rockwell, P.E.
Chief of Operations

Enclosure

cc: Kent Morihara
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Kauai Island Utility Cooperative Renewable Portfolio Standards (RPS) Status Report Year Ending December 31, 2020

KIUC RPS Results for 2020

Kauai Island Utility Cooperative (KIUC or Company) achieved a Renewable Portfolio Standard (RPS) percentage of 67.1% for calendar year 2020. This exceeds the State of Hawaii's 2020 RPS requirement of meeting 30% of net electricity sales with electrical energy generated and/or displaced by renewable resources.¹ All of KIUC's 2020 RPS was met by electrical energy generated using renewable energy as the source.²

KIUC met the electrical energy needs of its customers with a combination of Company-owned fossil fueled generation, Company-owned renewable generation, and both non-firm and firm renewable power purchases.³ In addition to this generated electricity, Photovoltaic (PV) systems and Demand Side Management (DSM) measures, including Solar Water Heating (SWH), also supplied some of KIUC consumers' energy needs, while at the same time, displacing fossil-fuel generated power. As of January 1, 2015, these sources are no longer counted toward KIUC's RPS. The portion of the RPS met by electrical energy generated using renewable energy as the source was 278,462 megawatt-hours (MWh), which is greater than the 2020 30% RPS requirement of 124,587 MWh.⁴ Exhibit A, attached hereto, illustrates how KIUC met the energy needs of its approximately 38,000 accounts.

KIUC's 2020 RPS percentage of 67.1% is 10.4% more than KIUC's 2019 RPS percentage of 56.6%. This is due to the following:

1. Much lower sales year over year, almost 10% less for 2020 than for 2019
2. Increased production from utility-scale solar and hydro projects

¹ Hawaii Revised Statutes (HRS) § 269-92(a)(3).

² See HRS § 269-92(b).

³ KIUC has twelve non-firm power purchase contracts to purchase electrical power from Gay & Robinson (G&R) (hydro), McBryde Resources (hydro), Kekaha Agriculture Association (KAA) (hydro), Pioneer Seed (solar), Kapaa Solar (solar), McBryde Resources (solar), MP2 Hawaii (solar), KRS2 Koloa (solar), KRS1 Anahola (solar), SolarCity / Tesla (solar and storage), AES Lawai (solar and storage) and AES Kekaha/PMRF (solar and storage). KIUC also has one firm purchase power contract, Green Energy Team (biomass).

⁴ 124,587 MWh is 30% of KIUC's 2020 sales of 415,291 MWh.

KIUC Future RPS Activities

While KIUC has already exceeded the 2020 and 2030 RPS goals of 30% and 40%, respectively, the Company is committed to even further increasing the growth of renewable energy and energy savings. To accomplish this, KIUC is undertaking the following:

1. On September 29, 2017, KIUC signed a PPA with AES Distributed Energy for the purchase of energy from a new solar and battery facility to be located at Pacific Missile Range Facility (PMRF). The Commission approved the PPA on June 20, 2018 and the project achieved commercial operation in the first quarter of 2021. This facility, given a full year of production in 2021, is expected to increase KIUC's annual RPS by three percentage points (i.e. to approximately 70% in 2020).
2. On December 30, 2020, KIUC signed a PPA with AES Clean Energy for the purchase of capacity and energy from a new solar, battery, pumped storage, and hydroelectric facility to be located on State land on the west side of Kauai. The Commission is reviewing the PPA, with an expected decision later in 2021. If approved, construction is expected to last into 2024. This facility, given a full year of production in 2025, is expected to increase KIUC's annual RPS by twenty percentage points (i.e. to 90% in 2025, although this depends heavily on future electric sales growth).
3. KIUC continues its efforts in securing a long-term water lease from the Department of Land and Natural Resources for the Waiahi hydro-electric facilities, to ensure that existing hydroelectric resources continue to contribute to KIUC's RPS.

Conclusion

KIUC's 2020 RPS percentage of 67.1% surpasses the 30% by 2020 RPS requirement by 37.1% and the 40% by 2030 RPS requirement by 27.1%. With current renewable energy sources and the future activities identified above, KIUC is on target to exceed the next RPS requirement of 70% by 2040, many years early. KIUC recognizes the benefits that renewable energy and energy savings provide to the visitors, residents, and commercial sectors of Kauai, as well as the positive impacts on global environmental, societal, and economic issues. As such, KIUC will continue to evaluate, promote, and incorporate renewable energy and energy savings to meet the needs of its members, the Kauai community, and the State.

Exhibit A

KIUC RPS Status Report	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1. Net Fossil Generation	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh
	413,355	419,451	441,154	417,986	399,325	400,307	392,689	389,180	376,778	360,103	335,162	279,451	276,387	284,780	232,912	170,345
2. Net Renewable Generation / Electrical Energy Generated Using Renewable Energy As Source ¹	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh	MWh
KIUC Hydro	4,232	4,561	926	7,968	7,454	7,896	6,974	7,591	8,063	7,598	6,961	6,904	6,455	4,329	3,553	2,565
Gay & Robinson Hydro	3,501	3,921	2,845	2,385	3,574	3,450	4,871	4,142	3,355	2,878	3,051	4,183	3,547	3,945	28,752	36,287
Kauli Coffee Hydro	26,292	25,613	20,612	22,149	21,756	18,296	21,208	23,038	18,501	18,693	19,566	19,263	19,010	19,676	17,774	19,086
KAA Hydro	3,466	3,024	2,079	3,106	4,141	4,374	5,457	3,775	3,154	4,922	3,915	3,804	1,637	1,312	1,994	1,284
Green Energy Hydro					5	189	407	366	278	200	153	147	106	2	0	0
Pioneer Solar							21	23	22	372	434	435	435	426	434	437
Kapasa Solar							1,468	1,858	1,827	1,759	1,787	1,802	1,826	1,536	1,719	1,697
MP2 Kaneshiro Solar									530	535	547	550	547	483	518	498
McBoyle Solar									11,945	10,042	10,772	10,260	10,612	10,539	10,593	10,781
KRS2 Koba Solar											20,654	21,804	20,934	17,604	17,082	20,019
KRS1 Anahole Solar											6,456	20,275	20,662	18,336	17,360	19,724
Green Energy Biomass											5,465	48,656	46,192	49,315	48,885	45,906
SolarCity / Tesla Solar and Storage													14,486	18,864	21,414	21,363
AES Lawai Solar and Storage														84	35,517	41,047
AES PMRF Solar and Storage															475	2,417
NEM											1,256	1,247	1,245	1,183	1,239	1,238
NEM Pilot											3,601	5,595	5,909	5,387	5,822	5,814
Larger Systems (No Buyback)											6,912	6,970	8,438	8,729	8,729	8,753
Schedule Q											26,497	30,209	35,402	34,334	39,337	39,547
Total	37,491	37,120	26,462	35,607	36,530	34,205	40,407	40,793	47,674	58,332	118,026	182,904	197,444	196,096	260,796	278,462

3. Electrical Energy Savings ²																
From Renewable Displacement or Off-Set Technologies ³																
Customer Renewable Generation (own use)	121	153	268	1,712	3,316	4,499	5,176	6,925	11,710	16,810	0	0	0	0	0	0
From Use of Energy Efficiency Technologies ⁴																
Demand Side Management (DSM)	20,855	21,349	21,361	19,233	19,217	16,911	18,264	24,368	22,441	21,370	19,947	33,549	34,900	34,933	34,131	33,532
Total	20,976	21,502	21,629	20,945	22,533	21,410	23,440	31,293	34,151	38,180	19,947	33,549	34,900	34,933	34,131	33,532

4 Total Sales / Total Electrical Energy Sales / Net Electricity Sales ⁵	448,611	452,080	468,896	453,791	436,273	434,533	434,745	433,159	431,478	429,924	432,078	439,088	445,098	451,114	460,710	415,281
Total Renewable Electrical Energy																
5. (2015 & after: Item 2 Total; pre-2015: Item 2 Total + Item 3 Total)	58,467	59,622	48,091	56,552	59,463	55,615	63,847	72,086	81,825	96,572	118,026	182,904	197,444	196,096	260,796	278,462
Total / RPS Percentage (Item 5 / Item 4)	13.03%	12.97%	10.30%	12.46%	13.63%	12.80%	14.69%	16.64%	18.96%	22.46%	27.32%	41.66%	44.36%	43.47%	56.61%	67.05%

Percent of Net Electricity Sales supplied by Item 2 Above	8.36%	8.21%	5.67%	7.85%	8.46%	7.87%	9.29%	9.42%	11.05%	13.58%	27.32%	41.66%	44.36%	43.47%	56.61%	67.05%
Percent of Net Electricity Sales supplied by Item 3 Above	4.68%	4.76%	4.63%	4.62%	5.16%	4.93%	5.39%	7.22%	7.91%	8.88%	4.62%	7.64%	7.84%	7.74%	7.41%	8.07%

¹ Renewable electrical energy generated via power purchase agreements with independent power producers is based on recorded data of the energy generated from the power producer facility, which is typically the net electricity energy sold to the utility, adjusted downward for system losses. Pursuant to the definition of "renewable electrical energy" under HRS Section 269-91, beginning January 1, 2015, this includes customer-sited, grid-connected renewable energy generation (e.g., net energy metering, Schedule Q).

² Pursuant to HRS Section 269-91(b)(2), beginning January 1, 2015, electrical energy savings shall not count toward the RPS.

³ Pursuant to HRS Section 269-91, under the definition of "Renewable electrical energy," these types of technologies include solar water heating, see-water air-conditioning district cooling systems, solar air-conditioning, and (up until, but not on or after January 1, 2015) customer-sited, grid-connected renewable energy systems.

⁴ Pursuant to Section III.A.3. of the RPS Framework: "Electrical energy savings brought about by the use of renewable displacement or off-set technologies shall be determined using actual recorded energy produced by the utility, as in the case of customer-sited renewable energy systems, the utility may make reasonable estimates of the energy produced by such systems, and provide an explanation of the calculation of the estimates. The electrical energy savings shall be expressed at a comparable level to the electrical energy generated using renewable energy sources (i.e., at the net generation level)."

⁵ Pursuant to HRS Section 269-91, under the definition of "Renewable electrical energy," energy efficiency technologies include heat pump water heating, ice storage, rebalancer-funded energy efficiency programs, and use of rejected heat from co-generation and combined heat and power systems, excluding fossil-fueled qualifying facilities that sell electricity to electric utility companies and central station power projects.

⁶ Pursuant to Section III.A.4. of the RPS Framework: "Electrical energy savings brought about by the use of energy efficiency technologies shall be determined using the actual gross energy savings (i.e., gross of (including) free-rides) reported by the utility or third-party DSM administrator in its annual DSM program report to the Commission excluding any electrical energy savings brought about by the use of renewable displacement or off-set technologies. The electrical energy savings shall be expressed at a comparable level to the electrical energy generated using renewable energy sources (i.e., at the net generation level)."

⁷ Pursuant to Section I of the RPS Framework "total electrical energy sales" or "net electricity sales" means the total MWh of electrical energy sold by a utility to its customers during a given year. KIUC notes that Item 1 (Net Fossil Generation) plus Item 2 (Net Renewable Generation) does not equal Item 4 (Net Electricity Sales). This is because prior to January 1, 2015, and as required by HRS § 269-91, Item 2 (Net Renewable Generation) did not include customer-sited, grid-connected renewable energy generation. Beginning January 1, 2015, Item 2 (Net Renewable Generation) includes customer-sited, grid-connected renewable energy generation, including exported energy and behind-the-meter energy. KIUC's sales of such customer-sited, grid-connected renewable energy generation (i.e., only the exported portion) are included in Item 4 (Net Electricity Sales).

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